

## REFERENCES

- Alongi, DM. 1998. Coastal Ecosystem Processes. Boca Raton, FL: CRC Press.
- Ambrose, RB, Jr, TA Wool, JL Martin. 1993. The Water Quality Analysis Simulation Program, WASP5. Part A: Model Documentation. U.S. Environmental Protection Agency, Office of Research and Development, Environmental Research Laboratory, Athens, GA.
- Anderson, DM. 2000. Symposium on harmful algae in the U.S. Symposium agenda, abstracts, and participants, Marine Biological Laboratory, Woods Hole, MA.
- Anderson, DM, DJ Garrison, eds. 1997. The ecology and oceanography of harmful algal blooms. *Limnol Oceanogr* 42:1305.
- Antia, NJ, PJ Harrison, L Oliveira. 1991. The role of dissolved organic nitrogen in phytoplankton nutrition, cell biology, and ecology. *Phycologia* 30:1-89.
- APHA (American Public Health Association). 1998. Standard Methods for the Examination of Water and Wastewater, 20th ed. American Public Health Association, Washington, DC.
- Asselin, S, ML Spaulding. 1993. Flushing times for the Providence River based on tracer experiments. *Estuaries* 16(4):830-839.
- Atlas, RM, R Bartha. 1993. Microbial Ecology Fundamentals and Applications. Redwood City, CA: Benjamin/Cummings.
- Azam, F, T Fenchel, JG Field, JS Gray, TA Meyer-Reil, F Thingstad. 1983. The ecological role of water-column microbes in the sea. *Mar Ecol Prog Ser* 10:257-263.
- Batiuk, R, R Orth, K Moore, JC Stevenson, W Dennison, L Staver, V Carter, N Rybicki, R Hickman, S Kollar, S Bieber. 1992. Submerged aquatic vegetation habitat requirements and restoration targets: a technical synthesis. U.S. EPA, Chesapeake Bay Program, Annapolis, MD. CBP/TRS 83/92.
- Batiuk, RA, P Bergstrom, M Kemp, E Koch, L Murray, JC Stevenson, R Bartleson, V Carter, NB Rybicki, JM Landwehr, C Gallegos, L Karrh, M Naylor, D Wilcox, KA Moore, S Ailstock, M Teichberg. 2000. Chesapeake Bay submerged aquatic vegetation water quality and habitat-based requirements and restoration targets: a second technical synthesis. Chesapeake Bay Program, Annapolis, MD. CBP/TRS 245/00. EPA 903-R-00-014.
- Behrenfeld, MJ, PG Falkowski. 1997. A consumer's guide to phytoplankton primary productivity models. *Limnol Oceanogr* 42(7):1479-1491.
- Bell, RG, DG Goring. 1998. Seasonal variability of sea level and sea-surface temperature on the north-east coast of New Zealand. *Estuarine Coastal Shelf Sci* 46:307-318.
- Bernhard, AE, ER Peele. 1997. Nitrogen limitation of phytoplankton in a shallow embayment in northern Puget Sound. *Estuaries* 20(4):759-769.
- Bianchi, TS, JR Pennock, RR Twilley, eds. 1999. Biogeochemistry of Gulf of Mexico Estuaries. New York: John Wiley.

Biggs, RB, DA Flemer. 1972. The flux of particulate carbon in an estuary. *Marine Biol (Berlin)* 12:11-17.

Billen, G, C Lancelot, M Meybeck. 1991. N, P, Si retention along the aquatic continuum from land to ocean. In: RFC Mantoura, J-M Martin, R Wollast, eds. *Ocean Margin Processes in Global Change*. New York: John Wiley, pp. 19-44

Bledsoe, EL, EJ Phlips. 2000. Relationships between phytoplankton standing crop and physical, chemical, and biological gradients in the Suwannee River and Plume Region, U.S.A. *Estuaries* 23(4):458-473.

Boicourt, WC. 1992. Influences of circulation processes on dissolved oxygen in the Chesapeake Bay. In: DE Smith, M Leffler, G Mackiernan, eds. *Oxygen Dynamics in the Chesapeake Bay: A Synthesis of Research*. Maryland Sea Grant College, College Park, MD, pp. 7-60.

Bolin, B, H Rodhe. 1973. A note on the concepts of age distribution and transit time in natural reservoirs. *Tellus* 25(1):58-62.

Boynton, WR. 1997. Potomac River integrated analysis project. Chesapeake Biological Laboratory, University of Maryland, Solomons, MD.

Boynton, WR, JH Garber, R Summers, WM Kemp. 1995. Inputs, transformations, and transport of nitrogen and phosphorus in Chesapeake Bay and selected tributaries. *Estuaries* 18(1B):285-314.

Boynton, WR, JD Hagy, L Murray, C Stokes, WM Kemp. 1996. A comparative analysis of eutrophication patterns in a temperate coastal lagoon. *Estuaries* 19(2B):408-421.

Boynton, WR, WM Kemp. 2000. Influence of river flow and nutrient loads on selected ecosystem processes: a synthesis of Chesapeake Bay data. In: JE Hobbie, ed. *Estuarine Science: A Synthetic Approach to Research and Practice*. Washington, DC: Island Press, pp. 269-298.

Boynton, WR, WM Kemp, CW Keefe. 1982. A comparative analysis of nutrients and other factors influencing estuarine phytoplankton production. In: V Kennedy, ed. *Estuarine Comparisons*. San Diego: Academic Press.

Brandes, JA, AH Devol. 1995. Simultaneous oxygen and nitrate respiration in coastal sediments: evidence for discrete diagenesis. *J Mar Res* 5:771-797.

Breitburg, DL, JG Sanders, CC Gilmour, CA Hatfield, RW Osman, GF Riedel, SP Seitzinger, KG Sellner. 1999. Variability in responses to nutrients and trace elements, and transmission of stressor effects through an estuarine food web. *Limnol Oceanogr* 44(3,2):837-863.

Bricker, SB, CG Clement, DE Pirhalla, SP Orlando, DRG Farrow. 1999. National estuarine eutrophication assessment: effects of nutrient enrichment in the Nation's estuaries. NOAA, National Ocean Service, Special Projects Office, and the National Centers for Coastal Ocean Science, Silver Spring, MD.

Brooks, DA, MW Baca, Y-T Lo. 1999. Tidal circulation and residence time in a macrotidal estuary: Cobscook Bay, Maine. *Estuarine Coastal Shelf Sci* 49:647-665.

- Brown, WS, E Arellano. 1980. The application of a segmented tidal mixing model to the Great Bay Estuary, NH. *Estuaries* 3(4):248-257.
- Brush, GS. 1984. Stratigraphic evidence of eutrophication in an estuary. *Water Res* 20(5):531-541.
- Brush, GS. 1986. Geology and paleoecology of Chesapeake Bay: a long-term monitoring tool for management. *J Wash Acad Sci* 76(3):146-160.
- Brush, GS. 1992. A stratigraphic study of Perdido Bay. Florida Dept. of Geography and Environmental Engineering, Johns Hopkins University, Baltimore, MD.
- Buchak, EM, Edinger, JE. 1984a. Generalized, longitudinal-vertical hydrodynamics and transport: development, programming and applications. U.S. Army Corps of Engineers, WES, Vicksburg, MS, June 1984. Document No 84-18-R.
- Buchak, EM, Edinger, JE. 1984b. Simulation of a density underflow into Wellington Reservoir using longitudinal-vertical numerical hydrodynamics. U.S. Army Corps of Engineers, WES, Vicksburg, MS, March 1984. Document No 84-18-R.
- Cai, W-J, LR Pomeroy, MA Moran, Y Wang. 1999. Oxygen and carbon dioxide mass balance for the estuarine-intertidal marsh complex of five rivers in the southeastern U.S. *Limnol Oceanogr* 44(3):639-649.
- Callaway, RJ. 1981. Flushing study of South Beach Marina, Oregon. *J Waterway, Port, Coastal and Ocean Div.* ASCE 107(WW2):47-58.
- Cambell, RC. 1989. *Statistics for Biologists*. 3rd ed. Cambridge: Cambridge University Press.
- Canfield, DE. 1993. Organic matter oxidation in marine sediments. Interactions of C, N, P, and S biogeochemical cycles. In: R Wollast, L Chou, F Mackenzie, eds. New York: Springer-Verlag, pp. 333-363.
- Capper, J, G Power, FR Shivers, Jr. 1983. *Chesapeake Waters: Pollution, Public Health, and Public Opinion, 1607-1972*. Centreville, MD: Tidewater Publishers.
- Caraco, N, JJ Cole, GE Likens. 1990. A comparison of phosphorus immobilization in sediments of freshwater and coastal marine systems. *Biogeochemistry* 9:277-290.
- Carlson, P, E Graneli. 1993. Availability of humic bound nitrogen for coastal phytoplankton. *Estuarine Coastal Shelf Sci* 36:433-447.
- Carpenter, SR, NF Caraco, DL Correll, RW Howarth, AN Sharpley, VH Smith. 1998. Nonpoint pollution of surface waters with phosphorus and nitrogen. *Ecol Appl* 8(3):559-568.
- Carpenter, SR, JF Kitchell, JR Hodgson. 1985. Cascading trophic interactions and lake productivity. *Bioscience* 35:364-369.
- Carriker, MR. 1967. Ecology of estuarine benthic invertebrates: a perspective. In: GH Lauff, ed. *Estuaries*. Washington, DC: American Association for the Advancement of Science, Publication 83, pp. 442-487.

- Carter, HH, RJ Regier, EW Schnierner, JA Michael. 1978. The summertime vertical distribution of dissolved oxygen at the Calvert Cliffs generating station: a physical interpretation. Chesapeake Bay Institute, The Johns Hopkins University, Special Report 60.
- Cerco, CF, T Cole. 1995. User's Guide to the CE-QUAL-ICM. Release Version 10. Technical Report EL-95-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Champ MA, GA Gould, III, WE Bozzo, SG Ackleson, KC Vierra. 1980. Characterization of light extinction and attenuation in Chesapeake Bay, August, 1977. In: VS Kennedy, ed. *Estuarine Perspectives*. New York: Academic Press, pp. 263-277.
- Chen, R, RR Twilley. 1999. Patterns of mangrove forest structure and soil nutrient dynamics along the Shark River Estuary, Florida. *Estuaries* 22(4):955-970.
- Christiansen, JP, JW Murray, AH Devol, LA Codispoti. 1987. Denitrification in continental shelf sediment has major impact on oceanic nitrogen budget. *Global Biogeochem Cycles* 1:97-116.
- Cifuentes, LA, LE Schemel, JH Sharp. 1990. Qualitative and numerical analyses of the effects of river inflow variations on mixing diagrams in estuaries. *Estuarine Coastal Shelf Sci* 30:411-427.
- Clark, GM, DK Mueller, MA Mast. 2000. Nutrient concentrations and yields in undeveloped stream basins of the United States. *J Am Water Res Assoc* 36:849-860.
- Clarke, KR, RM Warwick. 1994a. *Change in Marine Communities: An Approach to Statistical Analysis and Interpretation*. Natural Environment Research Council, Plymouth Marine Laboratory, Plymouth, England.
- Clarke, KR, RM Warwick. 1994b. Similarity-based testing for community pattern: the two-way layout with no replication. *Mar Biol* 118:167-176.
- Cloern, JE. 1982. Does the benthos control phytoplankton biomass in south San Francisco Bay (USA)? *Mar Ecol Prog Ser* 9:191-202.
- Cloern, JE. 1996. Phytoplankton bloom dynamics in coastal ecosystems: a review with some general lessons from sustained investigation of San Francisco Bay, California. *Rev Geophys* 34(2):127-168.
- Cloern, JE. 1999. The relative importance of light and nutrient limitation of phytoplankton growth: a simple index of coastal ecosystem sensitivity to nutrient enrichment. *Aquat Ecol* 33:3-16.
- Cloern, JE. 2001. Our evolving conceptual model of the coastal eutrophication problem. *Mar Ecol Prog Ser* 210:223-253.
- Cloern, JE, AE Alpine, BE Cole, RIJ Wong, JF Arthur, MD Ball. 1983. River discharge controls phytoplankton dynamics in the northern San Francisco Bay estuary. *Estuarine Coastal Shelf Sci* 16:415-529.
- Colwell, RR. 1996. Global climate and infectious disease: the Colera paradigm. *Science* 274:2025-2031.

Conley, DJ. 2000. Biogeochemical nutrient cycles and nutrient management strategies. *Hydrobiologia* 419:87-96.

Conley, DJ, TC Malone. 1992. Annual cycle of dissolved silicate in Chesapeake Bay: implications for the production and fate of phytoplankton biomass. *Mar Ecol Prog Ser* 81:121-128.

Conley, DJ, CL Shelske, EF Stoermer. 1993. Modification of the biogeochemical cycle of silica with eutrophication. *Mar Ecol Prog Ser* 101:179-192.

Cooper, SR. 1995. Chesapeake Bay watershed historical land use: impact on water quality and diatom communities. *Ecol Appl* 5:703-723.

Cornwell, JC, WM Kemp, TM Kana. 1999. Denitrification in coastal ecosystems: methods, environmental controls, and ecosystem level controls, a review. *Aquat Ecol* 33:41-54.

Costa, JE. 2000. Managing anthropogenic nitrogen inputs to coastal embayments: technical basis and evaluation of a management strategy adopted for Buzzards Bay: Supplementary information on water quality and habitat goals Buzzards Bay Project.

Costa, JE, BL Howes, D Janik, D Aubrey, E Gunn, AE Giblin. 1999. Managing anthropogenic nitrogen inputs to coastal embayments: technical basis and evaluation of a management strategy adopted for Buzzards Bay, Buzzards Bay Project.

Courtemanch, DC, SP Davies, EP Laverty. 1989. Incorporation of biological information in water quality planning. *Environ Manage* 13:35-41.

D'Elia, CF, DM Nelson, WR Boynton. 1983. Chesapeake Bay nutrient and plankton dynamics. III. The annual cycle of dissolved silica. *Geochim Cosmochim Acta* 47:1945-1955.

D'Elia, CF, JG Sanders, WR Boynton. 1986. Nutrient enrichment studies in a coastal plain estuary: phytoplankton growth in large-scale, continuous cultures. *Can J Fish Aquat Sci* 43:397-406.

Day, JW Jr, CAS Hall, WM Kemp, A Yanez-Arancibia. 1989. *Estuarine Ecology*. New York: John Wiley.

Dennison, WC, RJ Orth, KA Moore, JC Stevenson, V Carter, S Kollar, PW Bergstrom, RA Batiuk. 1993. Assessing water quality with submersed aquatic vegetation. Habitat requirements as barometers of Chesapeake Bay health. *Bioscience* 43:86-94.

Dettmann, EH. In press. Effect of water residence time on average concentrations, denitrification, and export of nitrogen in estuaries: a model analysis. *Estuaries*.

Dettmann, EH, WA Brown, WM Warren, MF Fox, DR Kester. 1992. Final report on application of a wasteload allocation model to multiple discharge sources into an estuary US Environmental Protection Agency Report. Narragansett, RI: Environmental Protection Agency. EPA/600/X-92/026.

Dettmann, EH, JF Paul, JS Rosen, CJ Strobel. 1989. Transport, fate and toxic effects of a sewage treatment plant effluent in a Rhode Island estuary. U.S. Environmental Protection Agency. Narragansett, RI. EPA/600/X-89/062.

- Devol, AH, LA Codispoti, JC Christensen. 1997. Summer and winter denitrification rate in western Arctic shelf sediments. *Cont Shelf Res* 9:1029-1050.
- Diaz, RJ, R Rosenberg. 1995. Marine benthic hypoxia: a review of its ecological effects and the behavioral responses of benthic macrofauna. *Oceanogr Mar Biol Ann Rev* 33:245-303.
- Digby, PGN. 1987. *Multivariate Analysis of Ecological Communities*. New York: Chapman and Hall.
- Dixon, LK, GJ Kirkpatrick. 1999. Causes of light attenuation with respect to seagrasses in the upper and lower Charlotte Harbor. Mote Marine Laboratory Technical Report No. 650. Sarasota, FL.
- Doering, PH, CA Oviatt, MEQ Pilson. 1990. Control of nutrient concentrations in the Seekonk-Providence River region of Narragansett Bay, Rhode Island. *Estuaries* 13(4):418-430.
- Dortch, Q, ML Parsons, NN Rabalais, RE Turner. 1998. What is the threat of harmful algal blooms in Louisiana coastal waters? In: LP Rozas, JA Nyman, CE Profitt, NN Rabalais, DJ Reed, RE Turner, eds. *From Symposium, Recent Research in Coastal Louisiana*, 3-5 February 1998, Lafayette, LA.
- Downing, JA. 1997. Marine nitrogen: Phosphorus stoichiometry and the global N:P cycle. *Biogeochemistry* 37:237-252.
- Dronkers, J. 1988. *Coastal-Offshore Ecosystem Interactions*. Berlin: Springer-Verlag.
- Duarte, CM. 1995. Submerged aquatic vegetation in relation to different nutrient regimes. *Ophelia* 41: 87-112.
- Dyer, K. 1973. *Estuaries: A Physical Introduction*. New York: Wiley-Interscience.
- Dyer, KR, PA Taylor. 1973. A simple, segmented prism model of tidal mixing in well-mixed estuaries. *Estuarine Coastal Mar Sci* 1:411-418.
- Eckblad, JW. 1991. How many samples should be taken? *BioScience* 41(5):346-348.
- Edinger, JE, EM Buchak. 1983. Developments in LARM2: A longitudinal-vertical, time-varying hydrodynamic reservoir model USAE Waterways Experiment Station, Vicksburg, MS. Technical Report E-83-1.
- ELI (Environmental Law Institute). 1988. *Almanac of Enforceable State Laws to Control Nonpoint Source Water Pollution*. Washington, DC. ELI Project # 970301.
- Elmgren, R, U Larsson. 1997. Himmerfjarden: forandringer i ett naringsbelastat kustekosystem i Osterjon. Rapport 4565. Naturvardsverket Forlag.
- Emerson, K, RC Russo, RE Lund, RV Thurston. 1975. Aqueous ammonia equilibrium calculations: effect of pH and temperature. *J Fish Res Bd Can* 32:2379-2383.
- Ennis, GP. 1986. Stock definition, recruitment variability, and larval recruitment processes in the American lobster, *Homarus americanus*: a review. *Can J Fish Aquat Sci* 43:2072-2084.

Environmental and Hydraulics Laboratories. 1986. CE-QUAL-W2, A Numerical Two-Dimensional, Model of Hydrodynamics and Water Quality, User's Manual, USACE Waterways Experiment Station, Vicksburg, MS. Instruction Report E-86-5.

Eppley, RW. 1972. Temperature and phytoplankton growth in the sea. *Fish Bull* 70(4):1063-1085.

Evans-Hamilton, Inc. 1998. Budd Inlet Scientific Study – Final Report. Prepared for: The Lacey, Olympia, Tumwater, Thurston County Partnership (LOTT), Seattle, WA.

Eyre, B, P Balls. 1999. A comparative study of nutrient behavior along the salinity gradient of tropical and temperate estuaries. *Estuaries* 22(2A):313-326.

Fairweather, PG. 1991. Statistical power and design requirements for environmental monitoring. *Austral J Mar Freshw Res* 42:555-567.

Fisher, TR, LW Harding, Jr, DW Stanley, LG Ward. 1988. Phytoplankton, nutrients, and turbidity in the Chesapeake, Delaware, and Hudson estuaries. *Estuarine Coastal Shelf Sci* 27:61-93.

Fisher, TR, ER Peele, JW Ammerman, LW Harding, Jr. 1992. Nutrient limitation of phytoplankton in Chesapeake Bay. *Mar Ecol Prog Ser* 82:51-63.

Flemer, DA. 1970. Primary production in Chesapeake Bay. *Chesapeake Sci* 11:117-129.

Flemer, DA, EM Lores, CM Bundrick. 1998. Potential sediment denitrification rates in estuaries of northern Gulf of Mexico. *J Environ Qual* 27(4):859-869.

Flemer, DA, GB Mackiernan, W Nehlsen, VK Tippie, et al. 1983. Chesapeake Bay: A Profile of Environmental Change. US EPA, Region 3, Philadelphia, PA, plus Appendices A-D.

Flint, RW. 1985. Long-term estuarine variability and associated biological response. *Estuaries* 8(A):158-169.

Fourqurean, JW, JC Zieman, GVN Powell. 1992a. Phosphorus limitation of primary production in Florida Bay: evidence from the C:N:P ratios of the dominant seagrass, *Thalassia testudinum*. *Limnol Oceanogr* 37:162-171.

Fourqurean, JW, JC Zieman, GVN Powell. 1992b. Relationships between porewater nutrients and seagrasses in a subtropical carbonate environment. *Mar Biol* 114:57-65.

Fulmer, DG, GD Cooke. 1990. Evaluating the restoration potential of nineteen Ohio reservoirs. *Lake Reservoir Manage* 6:197-206.

Funderburk, SL, SJ Jordan, JA Mihursky, DR Riley, eds. 1991. Habitat Requirements for Chesapeake Bay Living Resources, 1991 Revised Edition. Living Resources Subcommittee, Chesapeake Bay Program, Annapolis, MD.

Gallegos, CL. 1994. Refining habitat requirements of submersed aquatic vegetation: role of optical models. *Estuaries* 17(1B):187-199.

Gallegos, CL, TE Jordan. 1997. Seasonal progression of factors limiting phytoplankton pigment biomass in the Rhode River estuary, Maryland (USA). I. Controls on phytoplankton growth. *Mar Ecol Prog Ser* 168:185-198.

Gerlach, SA. 1990. Stickstoff, phosphor, plankton, und sauerstoff mangel in der Deutschen Bucht und in der Kieler Bucht Abschlussbericht über das Teilvorhaben 9, Koordination, im Rahmen des Forschungsbericht. 102 04 215. UBA-FB 89-083. Berlin: Erich Schmidt Verlag.

Geyer, WR. 1997. Influence of wind on dynamics and flushing of shallow estuaries. *Estuarine Coastal Shelf Sci* 44:713-722.

Geyer, WR, JT Morris, FG Prahal, DA Jay. 2000. Interaction between physical processes and ecosystem structure, Chapter 8. In: JE Hobbie, ed. *Estuarine Science—A Synthetic Approach to Research and Practice*. Washington, DC: Island Press, pp. 177-206.

Geyer, WR, P Dragos, T Donoghue. 1997. Flushing studies of three Buzzards Bay harbors: Onset Bay, Little Bay, and Allen's Pond Report prepared for the Buzzard Bay Project, Marion, MA (now located in Wareham, MA).

Gibson, G, R Wedepohl, D Knaver. 1983. Lake protection by watershed management for Wisconsin lake districts. Proceedings of the North American Lake Management Society, Vancouver, BC, Canada. EPA 44015-83-001.

Giller, PS, AG Hildrew, DG Raffaelli. 1994. *Aquatic Ecology—Scale, Pattern, and Process*. Oxford: Blackwell Scientific Publications.

Goldman, JC, JJ McCarthy, DG Peavey. 1979. Growth rate influence on the chemical composition of phytoplankton in oceanic waters. *Nature* 279(17 May):210-215.

Greening, HS, G Morrison, RM Eckenrod, MJ Perry. 1997. The Tampa Bay resource-based management approach. In: SF Treat, ed. *Proceedings, Tampa Bay Area Scientific Information Symposium 3: Applying Our Knowledge*. Tampa Bay Estuary Program, St Petersburg, FL. pp. 349-355.

Guilford, SJ, RE Hecky. 2000. Total nitrogen, total. phosphorus, and nutrient limitation in lakes and oceans: Is there a common relationship? *Limnol Oceanogr* 45(6):1213-1223.

Hagy, JD, LP Sanford, WR Boynton. 2000. Estimation of net physical transport and hydraulic residence times for a coastal plain estuary using box models. *Estuaries* 23(3):328-340.

Hamrick, JM. 1996. A User's Manual for the Environmental Fluid Dynamics Computer Code (EFDC). The College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA. Special Report 331.

Hansen, DV, M Rattray. 1966. New dimensions in estuary classification. *Limnol Oceanogr* 11:319-326.

Harding, LW, Jr. 1994. Long-term trends in the distribution of phytoplankton in Chesapeake Bay: roles of light, nutrients, and streamflow. *Mar Ecol Prog Ser* 104:267-291.

Harding, LW, ES Perry. 1997. Long-term increase of phytoplankton biomass in Chesapeake Bay, 1950-1994. *Mar Ecol Prog Ser* 157:39-52.



Harris, GP. 1986. *Phytoplankton Ecology—Structure, Function, and Fluctuations*. New York: Chapman and Hall.

Hass, LW. 1977. The effect of the spring-neap tidal cycle on the vertical salinity structure of the James, York, and Rappahannock rivers, Virginia, USA. *Estuarine Coastal Mar Sci* 5:485-496.

Hassett, RP, B Cardinale, LB Stabler, JJ Elser. 1997. Ecological stoichiometry of N and P in pelagic ecosystems: comparison of lakes and oceans with emphasis on the zooplankton-phytoplankton interaction. *Limnol Oceanogr* 42(4):638-662.

Havens, KE. 1999. Correlation is not causation: a case study of fisheries, trophic state and acidity in Florida (USA) lakes. *Environ Pollut* 106:1-4.

Hedges, JI, JH Stern. 1984. Carbon and nitrogen determinations of carbonate containing solids. *Limnol Oceanogr* 29:657-663.

Helder, W, RTP de Vries. 1983. Estuarine nitrite maxima and nitrifying bacteria (Elms-Dollard estuary). *Netherlands J Sea Res* 17:1-18.

Hirsch, RM, JR Slack, RA Smith. 1982. Techniques in trend analysis for monthly water quality data. *Water Res* 18:107-121.

Hobbie, JE, ed. 2000. *Estuarine Science—a Synthetic Approach to Research and Practice*. Washington, DC: Island Press.

Holland, AF, NK Mountford, JA Mihursky. 1977. Temporal variation in the upper bay mesohaline benthic communities: 1. The 9-m mud habitat. *Chesapeake Sci* 18:370-378.

Holland, AF, AT Shaughnessy, MH Hiegel. 1987. Long-term variation in mesohaline Chesapeake Bay macrobenthos: spatial and temporal patterns. *Estuaries* 10(3):227-245.

Holmes, RW. 1970. The Secchi disk in turbid coastal waters. *Limnol Oceanogr* 15:688-694.

Hopkinson, CS, RL Wetzel. 1982. In situ measurements of nutrient and oxygen fluxes in a coastal marine benthic community. *Mar Ecol Progr Ser* 10:29-35.

Howarth, R. 1988. Nutrient limitation of net primary production in marine ecosystems. *Ann Rev Ecol* 19:89-110.

Howarth, RW, G Billen, D Swaney, A Townsend, N Jaworski, K Lajtha, JA Downing, R Elmgren, N Caraco, T Jordan, F Berendse, J Freney, V Kudeyarov, P Murdoch, Z Zhao-Liang. 1996. Regional nitrogen budgets and riverine N&P fluxes, for drainages to the North Atlantic Ocean: natural and human influences. *Biogeochemistry* 35:75-79.

Howarth, RW, HS Jensen, R Marino, H Postma. 1995. Transport to and processing of phosphorus in near-shore and oceanic waters. In: H Tiessen ed. *Phosphorus in the Global Environment*. New York: John Wiley.

Huisman, J. 1999. Population dynamics of light-limited phytoplankton: microcosm experiments. *Ecology* 80(1):202-210.

Huisman, J, RR Jonker, C Zonneveld, FJ Weissing. 1999. Competition for light between phytoplankton species: experimental tests of mechanistic theory. *Ecology* 80(1):211-222.

Jackson, JBC, MX Kirby, WH Berger, et al. 2001. Historical overfishing and recent collapse of coastal ecosystems. *Science* 293(July):629-638.

Janicki, A, D Wade. 1996. Estimating critical external nitrogen loads for the Tampa Bay Estuary: an empirically based approach to setting management targets. Tampa Bay National Estuary Program, St. Petersburg, FL. Technical Publ # 06-96.

Jansson, B-O, K Dahlberg. 1999. The environmental status of the Baltic Sea in the 1940s, today, and in the future. *Ambio* 28(4):312-319.

Jaworski, NA, RW Howarth, LJ Hetling. 1997. Atmospheric deposition of nitrogen oxides onto the landscape contributes to coastal eutrophication in the northeast United States. *Environ Sci Technol* 31:1995-2004.

Jay, DA, WR Geyer, DR Montgomery. 2000. An ecological perspective on estuarine classification. In: JE Hobbie, ed. *Estuarine Science—A Synthetic Approach to Research and Practice*. Washington, DC: Island Press.

Jeffery, SW, RFC Mantoura, SW Wright. 1997. *Phytoplankton Pigments in Oceanography*. Monographs in Oceanographic Methods. Paris, UNESCO.

Jenkins, MC, WM Kemp. 1984. The coupling of nitrification and denitrification in two estuarine sediments. *Limnol Oceanogr* 29:609-619.

Johnson, BH, RE Heath, BB Hsieh, KW Kim, HL Butler. 1991. User's Guide for a Three-Dimensional, Numerical Hydrodynamic, Salinity, and Temperature Model of Chesapeake Bay. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Jonas, R. 1992. Microbial processes, organic matter and oxygen demand in the water column. In: D Smith, M Leffler, G Mackiernan, eds. *Dissolved Oxygen in Chesapeake Bay*. Maryland Sea Grant, College Park, MD. pp. 113-148.

Josefson, AB, B Rasmussen. 2000. Nutrient retention by benthic macrofaunal biomass of Danish estuaries: importance of nutrient load and residence time. *Estuarine Coastal Shelf Sci* 50(2):205-216.

Justic, D. 1987. Long-term eutrophication of the Northern Adriatic Sea. *Mar Pollut Bull* 18(6):281-284.

Kannerworff, E, W Nicolaisen. 1973. The "Haps": a frame-supported bottom corer. *Ophelia* 10:119-129.

Karr, JR. 1981. Assessment of biotic integrity using fish communities. *Fisheries* 6:21-27.

Keefe, CW, DA Flemer, DH Hamilton. 1976. Seston distribution in the Patuxent River Estuary. *Chesapeake Sci* 17:55-59.

Kelly, JR. 1998. Quantification and potential role of ocean nutrient loading to Boston Harbor, Massachusetts, USA. *Mar Ecol Prog Ser* 173:53-65.

- Kelly, JR. In press. Nitrogen effects on coastal marine ecosystems, Chapter 9. In: RF Follett, JL Hatfield, eds. Nitrogen in the Environment: Sources, Problems, and Management. The Netherlands: Elsevier Publishers.
- Kemp, WM, S Ailstock, R Batiuk, R Bartleson, P Bergstrom, V Carter, C Gallegos, W Hunley, L Karrh, EW Koch, J Landwehr, K Moore, L Murray, M Naylor, N Rybicki, JC Stevenson, D Wilcox. In Review. Habitat requirements for submerged aquatic vegetation in Chesapeake Bay: water quality, light regime, and physical-chemical factors.
- Kemp, WM, WR Boynton, RR Twilley, JC Stevenson, JC Means. 1983. The decline of submerged vascular plants in upper Chesapeake Bay: summary of results concerning possible causes. *Mar Tech Soc J* 17:78-89.
- Kemp, WM, WR Boynton. 1984. Spatial and temporal coupling of nutrient inputs to estuarine primary production: the role of particulate transport and decomposition. *Bull Mar Sci* 35(3):522-535.
- Kennedy, VS, ed. 1984. *The Estuary as a Filter*. New York: Academic Press.
- Kennish, MJ. 1989. *Practical Handbook of Marine Science*. CRC Press.
- Ketchum, BH. 1951. The exchanges of fresh and salt waters in tidal estuaries. *J Mar Res* 10(1):18-38.
- Kierstead, H, LB Slobodkin. 1953. The size of water masses containing plankton blooms. *J Mar Res* 12:141-147.
- Kinne, O. 1964. The effects of temperature and salinity on marine and brackish water animals. II. Salinity and temperature salinity combinations. *Oceanogr Mar Biol Ann Rev* 2:281-339.
- Kirk, JTO. 1983. *Photosynthesis in Aquatic Ecosystems*. Cambridge University Press.
- Kjerfve, B. 1989. Estuarine geomorphology and physical oceanography. In: JW Day, Jr, CAS Hall, WM Kemp, A Yanez-Arancibia, eds. *Estuarine Ecology*. New York: John Wiley.
- Knowlton, MF, JR Jones. 1989. Comparison of surfaces and depth integrated composite samples for estimating algal biomass and phosphorus values and notes on the vertical distribution of autotrophs in Midwestern lakes. *Arch Hydrobiol* 83(Suppl):175-196.
- Koch, E.W. 2001. Beyond light: physical, geological, and geochemical parameters as possible submersed aquatic vegetation habitat requirements. *Estuaries* 24(1):1-17.
- Koenigs, JP, JA Edmundson. 1991. Secchi disk and photometer estimates of light regimes in Alaskan lakes: effects of yellow color and turbidity. *Limnol Oceanogr* 36(1):91-105.
- Lambourn, LD, AH Devol, JW Murray. 1991. R/V New Horizon 90-5 cruise report: water column and porewater data. Univ. Washington.
- Lampman, GG, NF Caraco, JJ Cole. 1999. Spatial and temporal patterns of nutrient concentration and export in the tidal Hudson River. *Estuaries* 22(2A):285-296.

- Lebo, ME, JH Sharp. 1993. Distribution of phosphorus along the Delaware, an urbanized coastal plain estuary. *Estuaries* 16(2):290-301.
- Lee, GF, RA Jones. 1981. Application of the OECD eutrophication modeling approach to estuaries. In: Neilson, BJ, LE Cronin 1981, eds. *Estuaries and Nutrients*. Clifton, NJ: Humana Press, pp. 549-568.
- Lehman, PW. 2000. The influence of climate on phytoplankton community biomass in San Francisco Bay Estuary. *Limnol Oceanogr* 45(3):580-590.
- Lenihan, H, CH Peterson. 1998. How habitat degradation through fishery disturbance enhances impacts of oyster reefs. *Ecol Appl* 8:128-140.
- Likens. 1992. *The Ecosystem Approach: Its Use and Abuse*. Oldendorf/Luhe, Germany: Ecology Institute.
- Lippson, AJ, MS Haire, AF Holland, et al. 1979. *Environmental Atlas of the Potomac Estuary*. Maryland Department of Natural Resources, Annapolis, MD.
- Livingston, RJ. 1997. Trophic response of estuarine fishes to long-term changes of river runoff. *Bull Mar Sci* 60(3):984-1004.
- Livingston, RJ. 2001a. *Eutrophication Processes in Coastal Systems*. Boca Raton, FL: CRC Press.
- Livingston, RJ. 2001b. Nutrient loading and coastal plankton blooms: Seasonal/interannual successions and effects on secondary production. *Proceedings, IEEE International Symposium, Honolulu, Hawaii, 5-8 November 2001*.
- Lorenzen, CJ. 1972. Extinction of light in the ocean by phytoplankton. *J Conservation* 34:262-267.
- Lucas, LV, JR Koseff, SG Monismith, et al. 1999. Processes governing phytoplankton blooms in estuaries. II. The role of horizontal transport. *Mar Ecol Prog Ser* 187:17-30.
- Ludwig, JA, JF Reynolds. 1988. *Statistical Ecology*. New York: John Wiley.
- Luepke, N-P. 1979. *Monitoring Environmental Materials and Specimen Banking*. Boston: Martinus Nijhoff Publishers.
- Magnien, RE, RM Summers, KG Sellner. 1992. External nutrient sources, internal nutrient pools, and phytoplankton production in Chesapeake Bay. *Estuaries* 15(4):497-516.
- Mallin, MA, LB Cahoon, MR McIver, DC Parsons, GC Shank. 1999. Alteration of factors limiting phytoplankton production in the Cape Fear River Estuary. *Estuaries* 22(4):825-836.
- Malone, TC, A Malej, LW Harding, Jr, N Smolaka, RE Turner, eds. 1999. *Coastal and Estuarine Studies, Ecosystems at the Land-Sea Margin, Drainage Basin to Coastal Sea, 55*, American Geophysical Union, Washington, DC.
- Malone, TC, DJ Conley, TR Fisher, PM Gilbert, LW Harding, KG Sellner. 1996. Scales of nutrient-limited phytoplankton productivity in Chesapeake Bay. *Estuaries* 19(2B):371-385.

- Malone, TC, LH Crocker, SE Pike, BW Wendler. 1988. Influences of river flow in the dynamics of phytoplankton production in a partially stratified estuary. *Mar Ecol Prog Ser* 48:235-249.
- Malone, TC, WM Kemp, HW Ducklow, WR Boynton, JH Tuttle, RB Jonas. 1986. Lateral variation in the production and fate of phytoplankton in a partially stratified estuary. *Mar Ecol Prog Ser* 32:149-160.
- Manahan, SE. 1997. *Environmental Science and Technology*. Boca Raton and New York: Lewis Publishers.
- Martin, JL, PF Wang, T Wool. 1996. A mechanistic management-oriented water quality model for Tampa Bay. Surface Water Improvement and Management Department, Southwest Florida Water Management District, Tampa, FL.
- McComb, AJ, R Humphries. 1992. Loss of nutrients from catchments and their ecological impacts in the Peel-Harvey estuarine system, Western Australia. *Estuaries* 15:529-537.
- Meybeck, M. 1982. Carbon, nitrogen, and phosphorus transport by world rivers. *Am J Sci* 282:401-450.
- Miller, MW, ME Hay, SL Miller, D Malone, EE Sotka, AM Szmant. 1999. Effects of nutrients versus herbivores on reef algae: a new method for manipulating nutrients on coral reefs. *Limnol Oceanogr* 44(8):1847-1861.
- Miller, RL, BF McPherson. 1991. Estimating estuarine flushing and residence times in Charlotte Harbor, Florida, via salt balance and a box model. *Limnol Oceanogr* 36(3):602-612.
- Millero, FJ. 1996. *Chemical Oceanography*. 2nd Ed. Marine Science Series. CRC Press.
- Mills, EL. 1989. *Biological Oceanography—An Early History*. Ithaca: Cornell University Press.
- Mills, WB, Porcella, DB, Unga, MJ, Gherini, SA, Summers, KV, Lingfung, M, Rupp, GL, Bowie, GL, Haith, DA. 1985. *Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants*. U.S. Environmental Protection Agency, Athens, GA. EPA/600/6-85/002a,b.
- Monbet, Y. 1992. Control of phytoplankton biomass in estuaries: a comparative analysis of microtidal and macrotidal estuaries. *Estuaries* 15:563-571.
- Moore, KA, RL Wetzel. 2000. Seasonal variations in eelgrass (*Zostera marina* L). Responses to nutrient enrichment and reduced light availability in experimental ecosystems. *J Exp Mar Biol Ecol* 244:1-28.
- Muir, WC. 2001. USEPA Region III. Regional Office, Philadelphia, PA.
- NALMS (North American Lake Management Society). 1992. *Developing eutrophication standards for lakes and reservoirs*. Alachua Press.
- NAS (National Academy of Sciences). 1970. *Eutrophication: causes, consequences, correctives*. Proceedings of a symposium. Washington, DC.
- Neilson, BJ, LE Cronin, eds. 1981. *Estuaries and Nutrients*. Clifton, NJ: Humana Press.

- Newcombe, CL, WA Horne. 1938. Oxygen-poor waters of the Chesapeake Bay. *Science* 88:80-81.
- Newell, RIE. 1988. Ecological changes in Chesapeake Bay: are they the result of over harvesting the American oyster, *Crassostera virginica*?. In: MP Lynch, EC Krone, eds. *Understanding the Estuary: Advances in Chesapeake Bay Research*. Proceedings of a conference, March 1988. Publication 129. Chesapeake Research Consortium, Gloucester Point, VA. pp. 536-546.
- Nixon, SW. 1992. Quantifying the relationship between nitrogen input and the productivity of marine ecosystems. *Advanced Marine Technology Conference*, No 5. Tokyo, Japan.
- Nixon, SW. 1995. Coastal marine eutrophication: a definition, social causes, and future concerns. *Ophelia* 41:199-219.
- Nixon, SW. 2000. Nutrient inputs and the production of higher trophic levels (abstract). *Symposium on Nutrient Over-Enrichment of Coastal Waters: Global Patterns of Cause and Effect*. National Academy of Sciences, Washington, DC, October 11-13, 2000.
- Nixon, SW, JW Ammerman, LP Atkinson, et al. 1996. The fate of nitrogen and phosphorus at the land-sea margin of the North Atlantic Ocean. *Biogeochemistry* 35:141-180.
- Nixon, S, B Buckley, S Granger, J Bintz. In press. Responses of very shallow marine ecosystems to nutrient enrichment. *Int J Hum Ecol Risk Assess*.
- Nixon, SW, JR Kelly, BN Furnas, CA Oviatt, SS Hale. 1980. Phosphorus regeneration and the metabolism of coastal marine bottom communities. In: KR Tenore, BC Coull, eds. *Marine Benthic Dynamics*. University of South Carolina Press.
- Nixon, SW, SL Granger, BL Nowicki. 1995. An assessment of the annual mass balance of carbon, nitrogen, and phosphorus in Narragansett Bay. *Biogeochemistry* 31:15-61.
- NRC (National Research Council). 2000. *Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution*. Washington, DC: National Academy Press.
- O'Connor, DJ. 1965. Estuarine distribution of nonconservative substances. *J Sanitary Engineering Div ASCE* SA1:23-42.
- Odum, HT. 1956. Primary production in flowing waters. *Limnol Oceanogr* 1:102-117.
- Odum, HT, PR Burkholder, J Rivero. 1959. Measurements of productivity of turtlegrass flats, reefs, and the Bahia fosforescente of southern Puerto Rico. *Publ Inst Mar Sci* 6:159-170.
- Odum, HT, BJ Copeland. 1974. A functional classification of the coastal systems of the United States. In: HT Odum, BJ Copeland, EA McMahan, eds. *Coastal Ecological Systems of the United States*. Washington, DC: The Conservation Foundation and National Oceanic and Atmospheric Administration, pp. 5-85.
- Officer, CB, R Biggs, J Taft, et al. 1984. Chesapeake Bay anoxia: origin, development, and significance. *Science* 223:22-27.

Officer, CB, JH Ryther. 1980. The possible importance of silica in marine eutrophication. *Mar Ecol Prog Ser* 3:83-91.

Okaichi, JM. 1997. Red tides in the Seto inland Sea. In: T Okaichi, T Tanagi, eds. *Sustainable Development in the Seto Sea Inland Japan: from the Viewpoint of Fisheries*. Tokyo, Japan: Terra Scientific Publishing Company, pp. 251-304.

Olson, M, Lacouture, R. In review. Benchmarks for nitrogen, phosphorus, chlorophyll, and suspended solids in Chesapeake Bay, Chesapeake Bay Program. Technical Report Series, Annapolis, MD.

Orth, RJ, KA Moore. 1983. Chesapeake Bay: an unprecedented decline in submerged aquatic vegetation. *Science* 222:51-53.

O'Shea, ML, TM Brosnan. 2000. Trends in indicators of eutrophication in Western Long Island Sound and the Hudson-Raritan Estuary. *Estuaries* 23(6):877-901.

Ott, L. 1998. *An Introduction to Statistical Methods and Data Analysis*, 3rd ed. Boston, MA: PWS Publishing.

Ott, WR. 1995. *Environmental Statistics and Data Analysis*. New York: CRC Press.

Oviatt, C, P Doering, B Nowicki, L Reed, J Cole, J Frithsen. 1995. An ecosystem level experiment on nutrient limitation in temperate coastal marine environments. *Mar Ecol Prog Ser* 116:171-179.

Paerl, HW, DR Whitall. 1999. Anthropogenic-derived atmospheric nitrogen deposition, marine eutrophication and harmful algal bloom expansion: Is there a link? *Ambio* 28:307-311.

Paerl, HW, JD Willey, M Go, BL Peierls, JL Pinckney, ML Fogel. 1999. Rainfall stimulation of primary production in western Atlantic Ocean waters: roles of different nitrogen sources and co-limiting nutrients. *Mar Ecol Progr Ser* 176:205-214.

Parsons, TR, M Takahashi. 1973. *Biological Oceanographic Processes*. New York: Pergamon Press.

Parsons, TR, Y Maita, CM Lalli. 1984. *A Manual of Chemical and Biological Methods for Seawater Analysis*. New York: Pergamon Press.

Patsch, J, G Radach. 1997. Long-term simulation of the eutrophication of the North Sea: temporal development of nutrients, chlorophyll and primary production in comparison to observations. *J Sea Res* 38:275-310.

Pattulo, J, W Munk, R Revelle, R Strong. 1955. The seasonal oscillation in sea level. *J Mar Res* 14:88-155.

Pennock, JR, JH Sharp, WW Schroeder. 1994. What controls the expression of estuarine eutrophication? Case studies of nutrient enrichment in the Delaware Bay and Mobile Bay Estuaries, USA. In: KR Dyer, RJ Orth, eds. *Changes in Fluxes in Estuaries*. ECSA 22/ERF Symposium. Helstedsvej, Denmark: Olsen and Olsen.

Pennock, JR, JH Sharp. 1986. Phytoplankton production in the Delaware Estuary: temporal and spatial variability. *Mar Ecol Prog Ser* 34:143-155.

- Pennock, JR, JH Sharp. 1994. Temporal alteration between light- and nutrient-limitation of phytoplankton production in a coastal plain estuary. *Mar Ecol Prog Ser* 111:275-288.
- Pennock, JR. 1985. Chlorophyll distributions in the Delaware Estuary: regulation by light limitation. *Estuarine Coastal Shelf Sci* 21:711-725.
- Peterman, RM. 1990. The importance of reporting statistical power: the forest decline and acidic deposition example. *Ecology* 71:2024-2027.
- Pickett, STA. 1988. Space for time substitution as an alternative to long-term studies. In: GE Likens, ed. *Long-Term Studies in Ecology*. New York: Springer-Verlag, pp. 110-135.
- Pilson, MEQ. 1985. On the residence time of water in Narragansett Bay. *Estuaries* 8(1):2-14.
- Poole, HH, WR Atkins. 1929. Photo-electric measurements of submarine illumination throughout the year. *J Mar Biol Assoc UK* 16:297-394.
- Powell, GVN, WJ Kenworthy, JW Fourqurean. 1989. Experimental evidence for nutrient limitation of seagrass growth in a tropical estuary with restricted circulation. *Bull Mar Sci* 44:324-340.
- Pritchard, D. 1955. Estuarine circulation patterns. *Proc Am Soc Civil Eng* 81:717-1-717-11.
- Pritchard, D. 1967. What is an estuary: physical viewpoint. In: G Lauff, ed. *Estuaries*. Washington, DC: American Association for the Advancement of Science. Publication 83.
- Pritchard, DW. 1952. Estuarine hydrography. *Adv Geophys* 1:243-280.
- Pritchard, DW. 1969. Dispersion and flushing of pollutants in estuaries. *J Hydraulics Div ASCE* HY1:115-124.
- Rabalais, NN, RE Turner, D Justic, Q Dortch, WJ Wiseman, Jr, BK Gupta. 1996. Nutrient changes in the Mississippi River and system responses on the adjacent continental shelf. *Estuaries* 19:386-407.
- Rabalais, NN, RE Turner, WJ Wiseman, Jr, DF Boesch. 1991. A brief summary of hypoxia on the northern Gulf of Mexico continental shelf: 1985-1988. In: RV Tyson, TH Pearson, eds. *Geological Society Special Publication No 58*. London: The Geological Society.
- Radach, G. 1992. Ecosystem functioning in the German Bight under continental nutrient inputs by rivers. *Estuaries* 15:477-496.
- Redfield, AC. 1934. On the proportions of organic derivatives in sea water and their relation to the composition of plankton. *James Johnstone Memorial Volume (Liverpool)*, p. 176.
- Redfield, AC. 1958. The biological control of chemical factors in the environment. *Am Scientist* 46:205-222.
- Redfield, AC, BH Ketchum, FA Richards. 1963. The influence of organisms on the composition of sea-water. In: MN Hill, ed. *The Sea. Vol. 2. The Composition of Sea-Water. Comparative and Descriptive Oceanography*. New York: Interscience, pp. 26-77.



Riley, JP, R Chester. 1971. *Introduction to Marine Chemistry*. London and New York: Academic Press.

Roelke, DL. 2000. Copepod food-quality threshold as a mechanism influencing phytoplankton succession and accumulation of biomass, and secondary productivity: a modeling study with management implications. *Ecol Model* 134:245-274.

Roelke, DL, PM Eldridge, LA Cifuentes. 1999. A model of phytoplankton competition for limiting and non-limiting nutrients: implications for management of dynamic environments. *Estuaries* 22:92-104.

Rosenberg, R, R Elmgren, S Fleischer, P Jonsson, G Persson, H Dahlin. 1990. Marine eutrophication case studies in Sweden. *Ambio* 19(3):102-108.

Rudek, J, HW Paerl, MA Mallin, PW Bates. 1991. Seasonal and hydrological control of phytoplankton nutrient limitation in the lower Neuse River Estuary. *NC Mar Ecol Progr Ser* 75:133-142.

Ryding, SO, W Rast. 1989. *The Control of Eutrophication of Lakes and Reservoirs*. Man and the Biosphere Series. Vol. 1. Park Ridge, NJ: Parthenon Publication Group.

Rysgaard, S, P Thastum, T Dalsgaard, PB Christensen, NP Sloth. 1999. Effects of salinity on  $\text{NH}_4^+$  adsorption capacity, nitrification, and denitrification in Danish estuarine sediments. *Estuaries* 22(1):21-30.

Ryther, JH, CB Officer. 1981. Impact of nutrient enrichment on water uses. In: BJ Neilson, LE Cronin, eds. *Estuaries and Nutrients*. Clifton, NJ: Humana Press, pp. 247-261.

Sale, JW, WW Skinner. 1917. The vertical distribution of dissolved oxygen and the precipitation by salt water in certain tidal areas. *J Franklin Inst* 184(December):837-848.

Sand-Jensen, K, J Borum. 1991. Interactions among phytoplankton, periphyton, and macrophytes in temperate freshwater and estuaries. *Aquat Bot* 41:137-175.

Santschi, PH. 1995. Seasonality in nutrient concentrations in Galveston Bay. *Mar Environ Res* 40(3):337-362.

Schindler, DW. 1974. Eutrophication and recovery in experimental lakes: implications for lake management. *Science* 184:897-899.

Schindler, DW. 1977. Evolution of phosphorus limitation in lakes. *Science* 195:260-262.

Seitsinger, SP. 1988. Denitrification in freshwater and coastal marine ecosystems: ecological and geochemical significance. *Limnol Oceanogr* 33(part 2):702-724.

Seitsinger, SP, RW Sanders. 1999. Atmospheric inputs of dissolved organic nitrogen stimulate estuarine bacteria and phytoplankton. *Limnol Oceanogr* 44(3):721-730.

Seliger, HH, H Boggs. 1988. Long-term patterns of anoxia in the Chesapeake Bay. In: Lynch, M, EC Krone, eds. *Understanding the Estuary: Advances in Chesapeake Bay Research*. Solomons, MD: Chesapeake Research Consortium, pp. 570-583. Publ 129.

Seliger, HH, JA Boggs, SH Biggley. 1985. Catastrophic anoxia in the Chesapeake Bay in 1984. *Science* 228:70-73.

Sharma, B, RC Ahlert. 1977. Nitrification and nitrogen removal. *Water Res* 11:897-925.

Sharp, JH, LA Cifuentes, RB Coffin, JR Pennock, K-C Wong. 1986. The influence of river variability on the circulation, chemistry, and microbiology of the Delaware Estuary. *Estuaries* 9(4A):261-269.

Sharp, JH, LA Cifuentes, RB Coffin, ME Lebo, JR Pennock. 1994. Eutrophication. Delaware Estuary Situation Reports, University of Delaware Sea Grant College Program, Newark, DE.

Short, FT, DM Burdick, JE Kaldy, III. 1995. Mesocosm experiments quantify the effects of eutrophication on eelgrass, *Zostera marina*. *Limnol Oceanogr* 40:740-749.

Signell, RP, B Butman. 1992. Modeling tidal exchange and dispersion in Boston Harbor. *J Geophys Res* 97(C10):15591-15606.

Signell, RP. 1992. Tide- and wind-driven flushing of Boston Harbor, Massachusetts. In: ML Spaulding, K Bedford, A Blumberg, R Cheng, C Swanson, eds. *Estuarine and Coastal Modeling: Proceedings of the 2nd International Conference*, Tampa, FL, American Society of Civil Engineers. pp. 594-606.

Sillen, LG, AE Martell. 1964. *Stability Constants of Metal-ion Complexes*. London: The Chemical Society.

Sin, Y, RL Wetzel, IC Anderson. 1999. Spatial and temporal characteristics of nutrient and phytoplankton dynamics in the York River estuary Virginia: analyses of long-term data. *Estuaries* 22(2A):260-275.

Smith, DE, M Leffler, G MacKiernan. 1992. *Oxygen dynamics in the Chesapeake Bay: a synthesis of recent research*. Maryland and Virginia Sea Grant Programs, College Park, MD.

Smith, EM, WM Kemp. 1995. Seasonal and regional variations in plankton community production and respiration for Chesapeake Bay. *Mar Ecol Prog Ser* 116:217-231.

Smith, SV. 1984. Phosphorus versus nitrogen limitation in the marine environment. *Limnol Oceanogr* 29:1149-1160.

Smith, VH. 1998. Cultural eutrophication of inland, estuarine, and coastal waters. In: Pace, ML, PM Groffman, eds. *Successes, limitations, and frontiers in ecosystem science*. New York: Springer, pp. 7-49.

Smith, VH, GD Tilman, JC Nekola. 1999. Eutrophication: impacts of excess nutrient inputs on freshwater, marine, and terrestrial ecosystems. *Environ Pollut* 100:179-196.

Solis, RS, GL Powell. 1999. Hydrography, mixing characteristics, and residence times of Gulf of Mexico estuaries. In: Bianchi, TS, JR Pennock, RR Twilley, eds. *Biogeochemistry of Gulf of Mexico Estuaries*. New York: John Wiley & Sons, pp. 29-61.

- Sournia, A. 1978. Monographs on Oceanographic Methodology. No 6: Phytoplankton. Paris: UNESCO.
- Spellerberg, I. 1991. Monitoring Ecological Change. New York: Cambridge University Press.
- Spotte, S. 1992. Captive Seawater Fishes: Science and Technology. New York: John Wiley.
- Stepanauskas, R, L Leonardson, LJ Tranvik. 1999. Bioavailability of wetland-derived DON to freshwater and marine bacterioplankton. *Limnol Oceanogr* 44(6):1477-1485.
- Stephan, CE, DI Mount, DJ Hansen, GH Gentile, GA Chapman, WA Brungs. 1985. Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses. U.S. Environmental Protection Agency. NTIS Publication No. PB85-227-249.
- Stevens, DE. 1977. Striped bass (*Morone saxatilis*) year-class strength in relation to river flow in the Sacramento-San Joaquin estuary. *Calif Trans Am Fish Soc* 106:34-42.
- Stevenson, JC, LW Staver, KW Staver. 1993. Water quality associated with survival of submersed aquatic vegetation along an estuarine gradient. *Estuaries* 16(2):346-361.
- Strickland, JDH, TR Parsons. 1968. A practical handbook of seawater analysis. Bulletin 167, Fisheries Research Board of Canada, Ottawa.
- Sturgis, RB, L Murray. 1997. Scaling of nutrient inputs to submersed plant communities: temporal and spatial variations. *Mar Ecol Progr Ser* 152:89-102.
- Summers, RM. 1993. Point and no-point source nitrogen and phosphorus loading to the northern Chesapeake Bay Technical report. Baltimore, MD: Maryland Department of the Environment, Water Management Administration, Chesapeake Bay and Special Projects Program.
- Sutcliffe, WH, Jr. 1973. Correlations between seasonal river discharge and local landings of American lobster (*Homarus americanus*) and atlantic halibut (*Hippoglossus hippoglossus*) in the Gulf of St. Lawrence. *J Fish Res Bd Can* 30:856-859.
- Sutcliffe, WH, Jr, K Drinkwater, BS Muir. 1977. Correlations of fish catch and environmental factors in the Gulf of Maine. *J Fish Res Bd Can* 34:19-30.
- Swedish Environmental Protection Agency. 2000. Environmental Quality Criteria Coasts and Seas. Report 5052. Stockholm, Sweden.
- Takeoka, H. 1984. Fundamental concepts of exchange and transport time scales in a coastal sea. *Continental Shelf Res* 3(3):311-326.
- Taylor, D, S Nixon, S Granger, B Buckley. 1995. Nutrient limitation and the eutrophication of coastal lagoons. *Mar Ecol Progr Ser* 127:235-244.
- Thomann, RV, Mueller, JA. 1987. Principles of Surface Water Quality Modeling and Control. New York: Harper and Row.
- Thompson, SK. 1992. Sampling. New York: John Wiley.

Thursby, G, D Miller, S Poucher, L Coiro, W Munns, T Gleason. 2000. Ambient aquatic life water quality criteria for dissolved oxygen (saltwater): Cape Cod to Cape Hatteras. U.S. Environmental Protection Agency, Washington, DC. EPA-822-R-00-012.

Tomasko, DA, CJ Daves, MO Hall. 1996. The effects of anthropogenic nutrient enrichment on turtle grass (*Thalassia testudinum*). Estuaries 19(2B):448-456.

Turner, RE. 2001. Of manatees, mangroves and the Mississippi River: Is there an estuarine signature for the Gulf of Mexico? Estuaries 24(2):139-150.

Tyler, MA. 1984. Dye tracing of a subsurface chlorophyll maximum of a red-tide dinoflagellate to surface frontal regions. Mar Biol 78:285-300.

U.S. Department of the Interior. 1969. The National Estuarine Pollution Study, Federal Water Pollution Control Administration. 1:1-1.

U.S. Environmental Protection Agency (U.S. EPA). 1971. Methods for Chemical Analysis of Water and Wastes. NERC, AQCL, Cincinnati, OH. Method 414. In: Compendium of Methods for Marine and Estuarine Environmental Studies, pp. 175-183. EPA-503/2-89/001, 1990.

U.S. EPA. 1979. Methods for Chemical Analysis of Water and Wastes. National Environmental Research Center, Cincinnati, OH. EPA-600/4-79-020.

U.S. EPA. 1985. Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling. Washington, DC. EPA/600/3-85/040.

U.S. EPA. 1989. Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989. EPA 440/5-88-004.

U.S. EPA. 1989. Compendium of Methods for Marine and Estuarine Environmental Studies. EPA 503/2-89/001.

U.S. EPA. 1990. Biological Criteria National Program Guidance for Surface Waters. Washington, DC. EPA-440/5-90-004.

U.S. EPA. 1990a. Technical Guidance Manual for Performing Waste Load Allocations, Book III: Estuaries, Part I—Estuaries and Waste Load Allocation Models.

U.S. EPA. 1990b. Technical Guidance Manual for Performing Waste Load Allocations, Book III: Estuaries, Part II—Application of Estuarine Waste Load Allocation Models.

U.S. EPA. 1990c. Technical Guidance Manual for Performing Waste Load Allocations, Book III: Estuaries, Part III—Critical Review of Estuarine Waste Load Allocation Modeling.

U.S. EPA. 1992. Science Advisory Board report to Administrator Browner reviewing “Biological Criteria: Technical Guidance for Streams and Small Rivers.” Office of Research and Development, Washington, DC.

U.S. EPA. 1993. Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters. Office of Water, Washington, DC.

- U.S. EPA. 1994. Water Quality Standards Handbook. 2nd ed. Office of Water, Washington, DC. EPA-823-B-94-005b.
- U.S. EPA. 1995. QUAL-2E: The Enhanced Stream Water Quality Model. Model Documentation and User's Manual. EPA-823-B-95-003.
- U.S. EPA. 1996. Recommended Guidelines for Sampling and Analyses in the Chesapeake Bay Monitoring Program. Chesapeake Bay Program. EPA 903-R-96-006.
- U.S. EPA. 1997. Compendium of Tools for Watershed Assessment and TMDL Development. Office of Water, Washington D.C. EPA 841-B-97-006.
- U.S. EPA. 1998a. National strategy for the development of regional nutrient criteria. Office of Water, Washington, D.C. EPA 822-R-98-002.
- U.S. EPA. 1998b. Guidance for quality assurance project plans. Office of Research and Development, Washington, DC. EPA/600/R-98/018.
- U.S. EPA. 1999. Protocol for developing nutrient TMDLs. 1st ed. November 1999. Watershed Branch of Assessment and Watershed Protection Division, Office of Wetlands, Oceans, and Watersheds, Office of Water, Washington, DC. EPA-841-B-99-007.
- U.S. EPA. 2000a. Nutrient Criteria Technical Guidance Manual: Lakes and Reservoirs, First Edition. Office of Water, Office of Science and Technology, Washington, DC. EPA-822-B00-001.
- U.S. EPA. 2000b. Nutrient Criteria Technical Guidance Manual: Rivers and Streams. Office of Water, Office of Science and Technology, Washington, DC. EPA-822-B-00-002.
- Ulanowicz, RE. 1986. Growth and Development—Ecosystems Phenomenology. New York: Springer-Verlag.
- Ulanowicz, RE. 1997. Ecology, the Ascendent Perspective. New York: Columbia University Press.
- Valiela, I, et al. 1992. Couplings of watersheds and coastal waters: sources and consequences of nutrient enrichment in Waquoit Bay, Massachusetts. *Estuaries* 15:443-457.
- Valiela, I, G Collins, J Kremer, K Lajtha, M Geist, B Seely, J Brawley, CH Sham. 1997. Nitrogen loading from coastal watersheds to receiving estuaries: new method and application. *Ecol Appl* 7(2):358-380.
- Vitousek, PM, JD Aber, RW Howarth, GE Likens, PA Matson, DW Schindler, WH Schlesinger, DG Tilman. 1997. Human alteration of the global nitrogen cycle: sources and consequences. *Ecol Appl* 7(3):737-750.
- Vollenweider, RA. 1968. Scientific fundamentals of lake and stream eutrophication, with particular reference to phosphorus and nitrogen as eutrophication factors. Paris, France. Technical Report DAS/DSI/6827 OECD.
- Vollenweider, RA. 1976. Advances in defining critical loading levels of phosphorus in lake eutrophication. *Mem Ist Ital Idrobiol* 33:53-83.

- Vollenweider, RA. 1992. Coastal marine eutrophication: principles and control. *Sci Total Environ* (Suppl):1-20.
- Vollenweider, RA, R Marchetti, R Viviani, eds. 1992. *Marine Coastal Eutrophication*. New York: Elsevier Science.
- Walker, TA. 1980. A correction to the Poole and Atkins Secchi disc/light-attenuation formula. *J Mar Biol Assoc UK* 60:769-771.
- Walsh, JJ. 1988. *On the Nature of Continental Shelves*. New York: Academic Press.
- Ward, GH, Jr. 1980. Hydrography and circulation processes of Gulf estuaries. In: P Hamilton, KB MacDonald, eds. *Estuarine and Wetland Processes with Emphasis on Modeling*. Plenum Press, pp. 183-215.
- Watson, SW, FW Valois, JB Waterbury. 1981. The family nitrobacteraceae. In: MP Starr, H Stolp, HG Truper, A Balows, HG Schlegel, eds. *The Prokaryotes: A Handbook on Habitats, Isolation, and Identification of Bacteria*. Vol. 1. Berlin: Springer Verlag, pp. 1005-1022.
- Welschmeyer, NA. 1994. Fluorometric analysis of chlorophyll *a* in the presence of chlorophyll *b* and phaeopigments. *Limnol Oceanogr* 39:1985-1993.
- Wetzel, RG. 1975. *Limnology*. Philadelphia: WB Saunders.
- Wolfe, DA, MA Champ, DA Flemer, AJ Mearns. 1987. Long-term biological data sets: their role in research, monitoring, and management of estuarine and coastal marine systems. *Estuaries* 10(3):181-193.
- Wood, ED, FAJ Armstrong, FA Richards. 1967. Determination of nitrate in sea water by cadmium-copper reduction to nitrate. *J Mar Biol Assoc UK* 47:23-31.
- Zimmerman, JTF. 1976. Mixing and flushing of tidal embayments in the western Dutch Wadden Sea, Part I: Distribution of salinity and calculation of mixing time scales. *Netherlands J Sea Res* 10(2):149-191.